

CLAIMS

1. A polymer composition comprising a polymer and a synergistic flame retardant additive combination which comprises a nano-clay and a second filler, wherein, during combustion of the composition, a coherent char is formed.
2. A polymer composition as claimed in claim 1, wherein the nano-clay is Cloisite.
3. A polymer composition as claimed in claim 1 or claim 2, wherein the second filler is a known flame retardant filler, an inert filler or a combination thereof.
4. A polymer composition as claimed in any one of claims 1 to 3, wherein the second filler comprises at least one of aluminium trihydroxide, magnesium carbonate, magnesium hydroxide (or the ore Brucite), hydromagnesite, Huntite, boehmite and bauxite.
5. A polymer composition as claimed in any one of claims 1 to 3, wherein the second filler comprises at least one of chalk, talc and glass powder.
6. A polymer composition as claimed in any one of claims 1 to 5, wherein the proportion of the nano-clay to the second filler is from 90% : 10% to 10% : 90% by weight.
7. A polymer composition as claimed in any one of the preceding claims, wherein the total filler content is from 20% to 80% by weight.
8. A polymer composition as claimed in any one of the preceding claims, wherein the polymer is PVC.

9. A polymer composition comprising a polymer and a synergistic flame retardant additive combination which comprises a nano-clay and a second filler comprising at least one of aluminium trihydroxide, magnesium carbonate, magnesium hydroxide (or the ore Brucite), hydromagnesite, Huntite, boehmite and bauxite.
10. A polymer composition comprising a polymer and a synergistic flame retardant additive combination which comprises a nano-clay and a second filler comprising at least one of chalk, talc and glass powder.
11. A cable or wire coating formed from a polymer composition according to any one of claims 1 to 10.
12. A moulded or extruded material coated with a polymer composition according to any one of claims 1 to 10.
13. Use of a polymer composition according to any one of claims 1 to 10 as a char promoter.
14. A char promoting composition comprising a polymer and a synergistic flame retardant additive combination which comprises a nano-clay and a second filler.
15. A method of improving the char promoting properties of a polymer composition, which method comprises the steps of combining a polymer and a synergistic flame retardant additive combination which comprises a nano-clay and a second filler.